

CLAIMS

1. A method for recording the position of at least one component (6, 8, 10) in a location system (28) of a control system of an industrial facility (30) for an industrial process, **characterized** by

a) creating a model of the facility, including position coordinates for major parts of the facility,

b) storing the model in a location system storage means,

c) identifying a component in the facility,

d) placing a mobile information processing device (63) adjacent the component and detecting position coordinates for the mobile information processing device

e) storing identification information of the component and position coordinates of the mobile information processing device in the location system storage means.

2. A method according to claim 1, **characterized** by repeating steps c, d and e for each component that is to be recorded in the location system.

3. A method according to any of the preceding claims, **characterized** by using a positioning system, such as a global positioning system, to detect the position coordinates of each position in a geographical area of the model.

4. A method according to any of the preceding claims, **characterized** by using one or more nodes of wireless communication means to detect the position coordinates of each position in the model of the geographical area.

5. A method according to any of the preceding claims, **characterized** by using a wireless local area network to detect the position coordinates of each position in the model of the geographical area.

6. A method according to any of the preceding claims, **characterized** by using button means (64) or other input means (61, 62) to store the identification information of the component and position coordinates of the mobile information processing device in the location system.

7. A method according to any of the preceding claims, **characterized** by using a data display means (20) to store the identification information of the component and position coordinates of the mobile information processing device in the location system.

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8. A method according to any of the preceding claims, **characterized** by using wireless communication means (61) to store the identification information of the component and position coordinates of the mobile information processing device in the location system.

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9. A method according to any of the preceding claims, **characterized** by using a positioning system, such as a global positioning system, to detect the position coordinates of the location of the mobile information processing device.

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10. A method according to any of the preceding claims, **characterized** by using wireless means to detect the position coordinates of the location of the mobile information processing device.

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11. A method according to any of the preceding claims, **characterized** in that a component comprises individual identification means (65a, 65b, 65c) attached to the component, such as a tag, e.g. bar code, a radio frequency tag or a wireless technology link and by identifying the component in the control system by the individual identification means on the component.

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12. A method according to any of the preceding claims, **characterized** in that the control system comprises image recognition means of the component and by identifying the component in the control system by the image recognition means.

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13. A method according to any of the preceding claims, **characterized** by creating means to create position coordinates for a component in the location system when implementing the component in the control system.

14. A method according to any of the preceding claims, **characterized** by identifying a component in the location system by navigating through a corresponding control system.

5 15. A method according to any of the preceding claims, **characterized** by separating the model of the facility in sub-areas (21, 22, 23, 24, 25, 26, 27) and that each component located in that sub-area also has a sub-area position coordinate in the location system.

10 16. A method according to any of the preceding claims, **characterized** by locating a component in a physical implementation by the location coordinates of the component in the location system.

15 17. A method according to any of the preceding claims, **characterized** in that clicking on a component or a sub-area in the location system selects that component or sub-area.

20 18. A method according to any of the preceding claims, **characterized** in that the graphical representation of the location system is a data display picture such as a spread sheet, a drawing and/or a diagram.

25 19. A method according to any of the preceding claims, **characterized** in that the mobile information processing device communicates with the control system through a cable between the device and the component, or the control system.

30 20. A computer program comprising programming instructions to control a computer or a computer process to make it perform a method in an industrial system for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process, according to any of claims 1-19.

35 21. Use of a computer program according to claim 20 to control a computer or a computer process to make it perform a method in an industrial system for recording the position of at least one component in a location system of a con-

trol system of an industrial facility for an industrial process, according to any of claims 1-19.

22. A computer program according to claim 20 recorded on one or several
5 computer-readable media.

23. A graphical user interface for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process **characterized** by comprising:

- 10 a) display means to display said at least one component,
b) display means to display position coordinates for said component,
c) input means to register the position coordinates of said component.

24. A graphical user interface according to claim 23, **characterized** by comprising
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- a) input means to register identification information of the component
b) input means to register position coordinates of the mobile information.

25. A graphical user interface according to any of claims 23-24, **character-
20 ized** by comprising display means to identify a component.

26. A graphical user interface according to any of claims 23-25, **character-
ized** by comprising input means to register the position coordinates for the mobile information processing device.
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27. A graphical user interface according to any of claims 23-26, **character-
ized** by comprising

- 30 a) display means for creating a model of the facility, including position coordinates for major parts of the facility such as sub-areas,
b) input means to register position coordinates of the model.

28. A system for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process **characterized** by, comprising a mobile information processing device, such as
35 a mobile hardware Personal Digital Assistant (PDA), a computer program, graphical user interface, a positioning system such as indoor or outdoor GPS,

positioning by WLAN or other standards or protocols, or GSM, a location system and, a computer such as a tablet personal computer.

29. A system according to claim 28, **characterized** by, comprising wireless
5 access to information, for instance via General Packet Radio Service (GPRS),
WLAN, Bluetooth or other similar standards or protocols.

30. A mobile information processing device for recording the position of at least
one component in a location system of a control system of an industrial facility
10 for an industrial process **characterized** in that the device comprises a proces-
sor (40), memory means (41), standard interface (44), and input means.

31. A device according to claim 30, **characterized** in that the device comprises
a radio antenna (46) and radio receiver/transmitter hardware (45), and wireless
15 means.

32. A device according to claim 30-31, **characterized** in that it also comprises
a wireless hardware member.

20 33. A device according to claim 30-32, **characterized** in that the wireless
communication means is compatible with the ISM band with significant interfer-
ence suppression means by spread spectrum technology.

34. A device according to claim 30-33, **characterized** in that the wireless
25 communication means is compatible with a protocol wherein each data packet
may be re-sent one or more times per second at different frequencies in the
spectrum.

35. A device according to any of claims 30-34, **characterized** in that the device
30 comprises a configurable hardware I/O interface (input/output interface) (42).

36. A computerised industrial system including means to perform a method
in an industrial system for recording the position of at least one component in a
location system of a control system of an industrial facility for an industrial
35 process, according to any of claims 1-19.

37. A database containing information to be used in a method in an industrial system for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process, according to any of claims 1-19.

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38. A website comprising means to perform a method in an industrial system for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process, according to any of claims 1-19.

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39. A data communication signal for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process, **characterized** by comprising position information for a position of a mobile information processing device.

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40. A data communication signal for recording the position of at least one component in a location system of a control system of an industrial facility for an industrial process, **characterized** by comprising identification information of the component.

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